BULL. BOT. SURV. INDIA
Vol. 9, Nos. 1-4 : pp. 186-189, 1967

NEW RECORDS OF PLANTS FROM SOUTH INDIA

G. V. Subba Rao and G. R. Kumari (*nee* T. R. Kumari)
Botanical Survey of India, Coimbatore

ABSTRACT

The plants recorded here are not reported by earlier authors from the area. Detailed descriptions, important synonyms and salient distinguishing characters are given for each of the present new records to supplement the brief descriptions available in the existing floras and to facilitate easy identification. Comprehensive distribution data is also presented for all the plants reported in this paper.

MENISPERMACEAE

Tinospora malabarica (Lam.) Miers in Ann. Hist. Nat. ser. 2. 7: 38. 1851 et in Contr. Bot. 3: 32. 1871 ; Hook. f. & Thoms. Fl. Ind. 183. 1855 ; Hook. f. Fl. Brit. Ind. 1 : 96. 1872 ; Diels in Pflanzenr. 46: 142. 1910 ; Haines, Bot. Bih. Or. 2: 18. 1921 ; Kanjilal et al. Fl. Assam 1 : 55. 1935 ; Cooke. Fl. Pres. Bomb. 1 : 19 (Repr. ed.) 1958. *Menispermum malabaricum* Lam. Encycl. 4: 96. 1797. *Cocculus malabaricus* DC. Prodr. 1 : 97. 1824. *Tinospora tomentosa* (Colebr.) Miers in Ann. Hist. Nat. ser. 3. 13: 319. 1864 et in Contr. Bot. 3: 33. 1871 ; Hook. f. l.c. ; Diels l.c. ; Prain, Beng. Pl. 1 : 137. (Repr. ed.) 1963. *Cocculus tomentosus* Colebr. in Trans. Linn. Soc. 13: 59. 1822. *Menispermum tomentosum* Roxb. Fl. Ind. 3: 813. 1832.

A climber ; stem with papery bark and lenticels ; branchlets pubescent. Leaves ovate, cordate, 3-6×2.5-5.5 cm, entire, younger acuminate and older tripartite at tip, base deeply cordate, tomentose above and woolly beneath, basal nerves 7 ; petiole 1.5-5 cm long, striate hairy, twisted at base. Male flowers yellowish green, racemes generally cauliflorus, 5-14 cm long, bracts subulate, 1-1.5 mm long, membranous, pedicels slender, clustered, 5-6 mm long ; sepals yellowish green, ciliate, 6 in two whorls, outer 3 small, 1-1.5 mm long and ± 1 mm broad, inner 3 large, membranous, concave, ± 4×3 mm ; petals 6 in a single whorl, smaller than the larger sepals, ± 2.5×1.5 mm, rhomboid-ovate, clawed at base, rounded at apex, ciliate ; stamens 6, ± 3.5 mm long, filaments thin, gradually widening towards apex, anther lobes obliquely adnate, dehiscing obliquely. Female flowers not seen.

This species can be distinguished from *T cordifolia* Miers by its pubescent shoots and tomentose leaves.

Andhra Pradesh: Visakhapatnam Dt., Adapavalasa, 925 m alt., *Subba Rao* 22616 (MH), common.

Distribution : Sikkim, Assam, Bengal, Bihar Western Peninsula (Konkan: S. & N. Kanara), Ceylon and Burma.

COMPOSITAE

Saussurea heteromalla (D. Don) Hand.-Mazz. Symb. Sin. 7: 1152. 1936. *S. candicans* C. B. Clarke, Comp. Ind. 232, 1876 et in Hook. f. Fl. Brit. Ind. 3: 373. 1881 ; Duthie, Fl. Upp. Gang. Pl. 1 : 440. (Repr. ed.) 1960 ; Prain, Beng. Pl. 1 : 459. (Repr. ed.) 1963 ; Haines, Bot. Bih. Or. 4: 491. 1922. *S. Brahuica* Boiss. Fl. Orient. 3: 566. 1859. *Cnicus heteromallus* D. Don, Prodr. Fl. Nep. 166. 1825. *Cirsium heteromallum* Spreng. Syst. 3: 372, 1826. *Aplotaxis candicans* DC. Prodr. 6: 540. 1838. *A. scaposa* Edgew. Trans. Linn. Soc. 20: 76. 1846.

Annual, up to 1.5 m. Stem ridged, hollow on drying. Leaves *ca.* 16×5 cm, cauline, sessile, oblong or obovate-oblong, entire or sinuate toothed or lobulate at base or lyrate-pinnatifid, pubescent above, cottony or white tomentose beneath. Heads ± 3 cm across, long peduncled, in large open panicled corymbs ; peduncles tomentose ; involucral bracts tomentose, lanceolate, acuminate, ± 15 mm long ; corolla tube ± 15 mm long, purple ; anther tails lacerate ; receptacle bristles ± 1 cm long and white. Achenes ± 5mm, five angled, cupular above, muricate ; pappus white, slender, equalling corolla, outer pappus 0.

The genus *Saussurea* has not been reported by Gamble. It comes near to *Goniocaulon* but differs from it in having glabrous filaments and multiseriate pappus hairs.

Andhra Pradesh: Visakhapatnam Dt., Kilagada, 900 m alt., *Subba Rao* 22592 (MH), a stray road side weed.

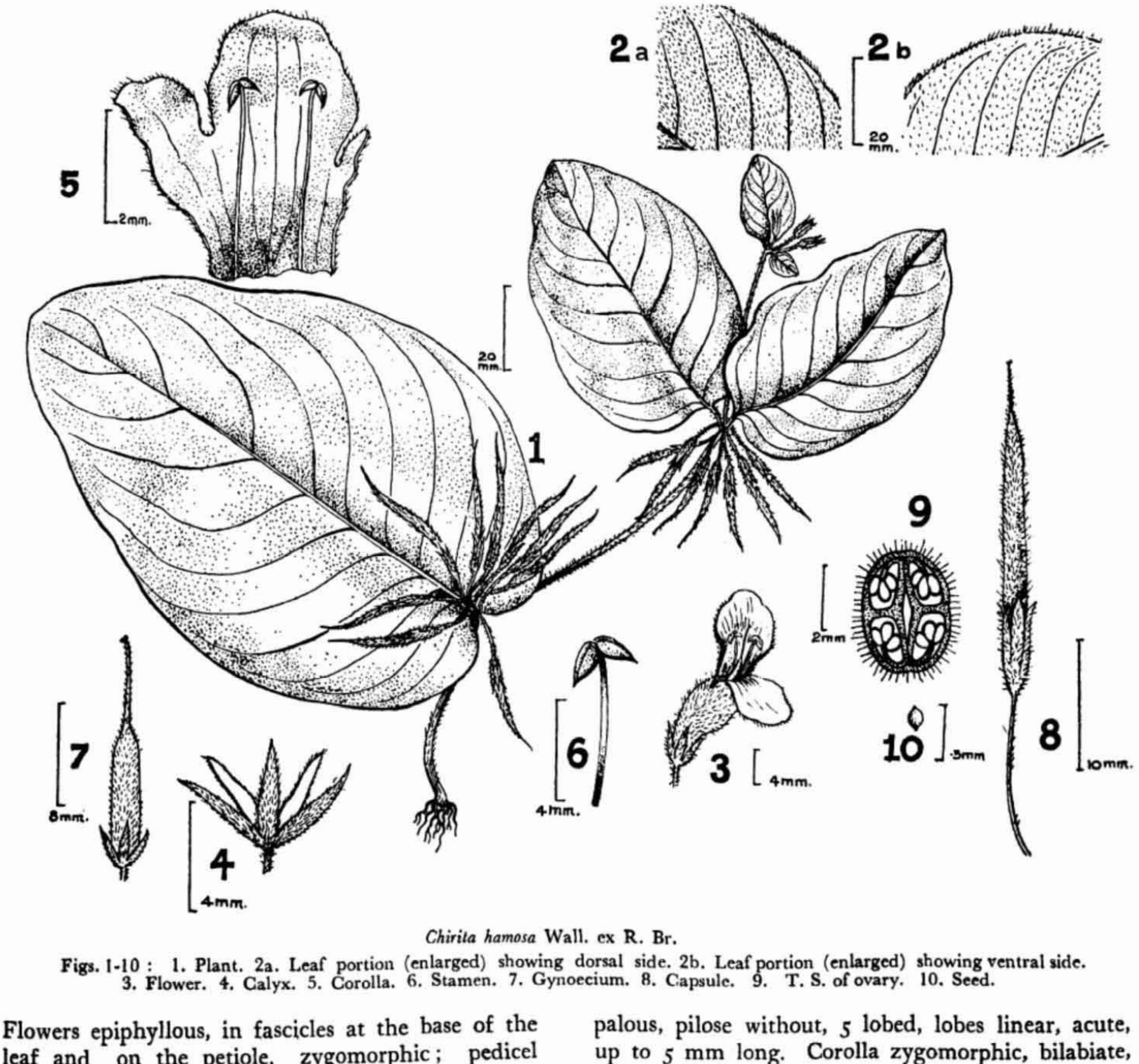
Distribution : Subtropical and Temperate Western India and the Himalayas ; Plains of Bengal and

Punjab; from Hazara to Kashmir and Bhutan; also in Afghanistan and Baluchistan.

GESNERIACEAE

Chirita hamosa Wall. ex R. Br. in Benn. Pl. Jav. Rar. 117. 1840; Clarke, Comm. et Cyrt. Beng. t. 78. 1874, in DC. Mon. Phan. 5: 1883 et in Hook. f. Fl. Brit. Ind. 4: 360. 1884; Cooke Fl. Pres. Bomb. 2: 306. (Repr. ed.) 1958. *Didymocarpus hamosa* Wall. Cat. 788. 1829 nom. nud. *D. cristata* Dalz. & Gibs. Bomb. Fl. 134. 1861. *Chirita hamosa* Wall. ex R. Br. var. *unifolia* Clarke in Hook. f. op. cit. 361; Santapau, J. Bombay nat. Hist. Soc. 53: 211. 1955.

Herb, annual, growing on moss covered rocks; stem short (2.5-8 cm), pilose. Leaves ovate, obtuse or acute, base rounded (sometimes cordate in lower leaf), pilose, margin entire, midrib and veins prominent below, petiole up to 3 mm long. Lower leaf 1 (sometimes an opposite leaf is present but very small, about 7×5 mm), 6.5-14.5×5.5-9 cm, upper leaves 2 to 4, opposite, 1-7.5×0.6-4 cm. Flowers epiphyllous, in fascicles at the base of the leaf and on the petiole, zygomorphic; pedicel about 6 mm long. Calyx actinomorphic, gamosepalous, pilose without, 5 lobed, lobes linear, acute, up to 5 mm long. Corolla zygomorphic, bilabiate, white, pilose without, 8-9 mm long. Stamens 2,



Chirita hamosa Wall. ex R. Br.

Figs. 1-10: 1. Plant. 2a. Leaf portion (enlarged) showing dorsal side. 2b. Leaf portion (enlarged) showing ventral side. 3. Flower. 4. Calyx. 5. Corolla. 6. Stamen. 7. Gynoecium. 8. Capsule. 9. T. S. of ovary. 10. Seed.

epipetalous, anthers versatile. Ovary pilose, bicarpellate, placentation parietal; ovules numerous; style slender; stigma bilobed. Fruit a loculicidal capsule up to 2 cm long. Seeds numerous, minute, smooth (Figs. 1-10).

The genus *Chirita* Buch.-Ham. was not reported by Gamble in the Flora of the Presidency of Madras. It is allied to the genus *Didymocarpus* Wall. but can be distinguished thus:

Capsule sub-follicular, 4-valved; stigma entire, capitate *Didymocarpus*
Capsule two valved; stigma bifid, oblique ....*Chirita*

The difference between *Chirita* Buch.-Ham. and *Didymocarpus* Wall. are rather minute ambiguous. The former is said to possess a bilobed stigma while the latter an entire one. Though C. B. Clarke (l.c. 356) considered the differences between the two genera as unsatisfactory, he abstained from using them into one. Otto Kuntze (Rev. Gen. Pl. 1891) united the two genera into one, under *Rottlera* Vahl. The entire position has been reconsidered by Prof. B. L. Burtt who is in favour of retaining the two genera separate. Santapau (l.c.) following Burtt (Notes R. bot. Gardn. Edinb. 21: 185-209. 1954) kept the two genera separate. According to Burtt (l.c.) the stigma of the typical *Chirita* is oblique, bifid and slender while the stigma of a typical *Didymocarpus* is a robust capitate structure.

Prof. B. L. Burtt, who has kindly examined the specimen, commented thus in his letter; "The plant is what I take to be the true *Chirita hamosa* Wall. ex R. Br. This has small white flowers. These specimens approach the one leafed state sometimes called var. *unifolia*, but this only depends on growing conditions and these plants although they have flowered as var. *unifolia* are now producing small stems."

ANDHRA PRADESH: Visakhapatnam Dt., Srungavarapukota, 150 m alt., *Subba Rao* 21819 (MH), rare.

Distribution: Khasia Mts., Martaban, Moulmein, West Deccan Peninsula.

LAURACEAE

Beilschmiedia sikkimensis King ex Hook. f. Fl. Brit. Ind. 5: 122. 1886.

Medium sized tree, young branchlets obscurely tomentose. Leaves glabrous, entire, opposite, very rarely subopposite, 7-12 × 2.5-4.5 cm, elliptic oblong, acute, rarely obtuse, secondary nerves ± 12 pairs, nerves and reticulation more prominent beneath; petiole 1-1.5 cm long, obscurely tomentose, Fruit elliptic, 2.8-3.5 cm long, pedicel 2 cm long, obscurely tomentose. Seed one.

This species is allied to *B. roxburghiana* Nees but differs from it in having opposite branches and leaves, much smaller leaves which are more rounded at both ends and smaller and elliptic fruits.

ANDHRA PRADESH: E. Godavari Dt., Ramavaram to Nulakamaddi (on the banks of the hill stream), 525 m alt., *Subba Rao* 27449 (MH), a few trees observed only in the area cited.

Distribution: Sikkim Himalayas and East Nepal.

ORCHIDACEAE

Eulophia explanata Lindl. Gen. et Sp. Orchid. 180. 1833; Hook. f. Fl. Brit. Ind. 6: 3, 1890 et Hook. Ic. Pl. 19: t. 1882. 1889; Duthie, Fl. Upp. Gang. Pl. 2: 280. (Repr. ed.) 1960. *Dipodium scariosum* Ham.: Hook. f. & Duthie, 11. cc.

A terrestrial orchid, about 12 cm high, pseudobulbs 3, ovoid, each ± 2 cm long, hypogeal. Leaves elliptic lanceolate, young at flowering time. Scape lateral, ± 32 cm long, sheaths few (each ± 3.5 cm long), about 10 flowered, bracts ± 5 mm. Flowers yellow, ± 15 mm across, pedicels ± 1 cm long; sepals and petals subequal; sepals spathulate-lanceolate, acute; petals broadly oblong, rounded at the apex, lip sessile, obscurely 3 lobed, shorter than sepals and petals, adnate at the base to lateral sepals, basal lobes forming a small sac, column very short. This species is near to *E. herbacea* Lindl. but differs in having smaller scapes, small bracts, smaller pedicels and small yellow flowers.

ANDHRA PRADESH: Visakhapatnam Dt., Cheedipalem, 325 m alt., *Subba Rao* 27439 (MH), rare.

Distribution. N. W. India, Sub-Himalayan tracts, Dehra Dun, outer Himalayan ranges of Garhwal; Nepal at Maghada in the Morung Dt.

ERIOCAULACEAE

Eriocaulon luzulifolium Mart. in Wall. Pl. As. Rar. 3: 28. 1832: Kunth, Enum. Pl. 3: 553. 1841; Schnizl. Ic. 46 (Figs. 2 & 5); Steud. Syn. Pl. Cyp. 2: 270. 1855; Koern. in Linnaea 27: 636. 1856; Hook. f. Fl. Brit. Ind. 6: 582. 1893 (*pro parte*); Ruhl. in Pflanzenr. 13: 88. 1903; Fyson in Jour. Ind. Bot. 2: 200. t. 8. 1921. Prain, Beng. Pl. 2. 2: 849. (Repr. ed.) 1963.

A marshy herb, stems hypogeal, sometimes elongate, roots fibrous. Leaves caespitose, linear, lanceolate, obtuse, rarely acute, glabrous, flat and opaque, 4.5-9.5 cm long, 2-5.5 mm broad in the middle, base fenestratus, 10-18 nerved. Peduncles several, aggregate, straw coloured, 5 ribbed, twisted, glabrous, 5-30 cm long; sheaths lax, obliquely cleft, green, straw coloured at the tip, ± striate, 4-5.5 cm long. Capitula semiglobose, somewhat hard, 2-4 × 1.5-3.5 mm, involucral bracts straw coloured, glabrous, membranous, 2 × 1 mm, cut irregularly at the apex; floral bracts 2 mm long, tapering, width 0.8 mm above and 0.5 mm below, dark with white hairs towards tip making heads appear grey; receptacle conical, pubescent. Staminate flowers: pedicellate; sepals 3, connate below, lobes oblong-obovate, obtuse, ±2 mm long, less than 0.5 mm broad, dark, tipped with white bristles; petals tubular, white as long as sepals, 3 lobed, glabrous, eglandular; stamens 6, in two whorls, outer whorl longer and larger than inner, anthers 2 lobed, black. Pistillate flowers: sepals 3, linear-oblong, ± 2 mm long, acute, falcate, apex pilose; petals 3, oblanceolate, ± 2 mm long, acute, eglandular, apex puberulus, glabrous lower down; ovary 3 celled, cells 1-ovuled, style short, persistent, stigmas 3, slender. Seeds oblong, 0.6 × 0.4 mm, yellow, striate and granular.

This species is near to *E. quinquangulare* Linn. but differs in having green leaves, green sheaths, longer scapes, non reflexing involucral bracts and glabrous petals in male flowers. It is also allied to *E. thwaitesii* Koern. but can be distinguished by its longer scapes and oblanceolate petals in female flowers which lack long hairs at the base.

ANDHRA PRADESH: Visakhapatnam Dt., Anantagiri, 1125 m alt., *Subba Rao* 21758 (MH), common.

Distribution: Central Himalayas, Nepal, Assam, Silhet, Bengal and Burma.

Note: Hook. f. (l.c.) gives the distribution as throughout India but according to Fyson (l.c. 136) this species is restricted to Nepal, Assam, Bengal and Upper Burma.

ACKNOWLEDGEMENTS

Our grateful thanks are due to Prof. B. L. Burtt, Royal Botanic Gardens, Edinburgh and to Dr. S. K. Mukerjee, Keeper, Central National Herbarium, Calcutta for help in identification.